

STATE OF UTAH
DIVISION OF WATER QUALITY
DEPARTMENT OF ENVIRONMENTAL QUALITY
SALT LAKE CITY, UTAH

AUTHORIZATION TO DISPOSE OF BIOSOLIDS
UNDER THE UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM (UPDES)

In compliance with provisions of the *Utah Water Quality Act, Title 19, Chapter 5, Utah Code Annotated ("UCA") 1953, as amended* (the "Act"),

R³ of Utah, L.C.

is authorized to dispose of biosolids in accordance with application sites, specific limitations, monitoring requirements, management practices and other conditions set forth herein. Authorization to dispose of biosolids is limited by the specific provisions of this permit.

This permit modification shall become effective XXXXX.

This permit and the authorization to dispose of biosolids shall expire at midnight, XXXXX

Signed this XX day of XXXX, XXX.

Walter L. Baker, P.E.
Executive Secretary
Utah Water Quality Board

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I. BIOSOLIDS PERMIT, SPECIFIC LIMITATIONS AND MONITORING REQUIREMENTS

A. Description of Biosolids To Be Accepted, Treated and Disposed

1. Acceptance

- a. All out of state biosolids (sewage sludge) accepted at R³ must be obtained from public owned treatment works (POTWs) and must meet at least Class B standards.
- b. All other biosolids accepted at R³ under this permit are biosolids from POTWs that have valid Biosolids Management Permits (BMP) issued from the Department of Environmental Quality (DEQ), State of Utah. The method and sites for disposal are specifically designated below.

Treatment

Biosolids may be composted, air-dried or turned mechanically as needed on an impermeable pad to meet to meet applicable Class A or Class B pathogen and vector attraction reduction standards

Biosolids Disposal Methods

- a. Class A biosolids are land applied at agronomic rates for agriculture use, or sold or given away to the public.
- b. Class B biosolids are land applied at agronomic rates for agricultural use.
- c. Biosolids not meeting Class A or Class B standards are land filled.

For any biosolids that are land filled, the requirements of *Utah Administrative Code R315-301-5* and *Section 2.12* of the latest version of the *EPA Region VIII Biosolids Management Handbook* must be followed.

2. Changes in Treatment Systems and Disposal Practices.

Should R³ change their disposal methods or the biosolids generation and handling processes of the site, R³ must notify the Executive Secretary at least 180 days in advance. These changes include, but are not limited to, methodology, testing, the addition or removal of any biosolids treatment equipment (e.g., machinery, drying beds, etc.) and/or any other change that may affect the quality of the biosolids or require a major modification of the permit.

B. Specific Limitations and Self-Monitoring Requirements.

All biosolids generated by this facility that are land applied shall meet the requirements of *Part I.B.1, 2, 3, and 4* listed below.

1. Metals Limitations:

Class A Requirements:

If the biosolids are to be applied to a lawn or home garden, the biosolids shall meet the maximum heavy metals in Table 1 and the monthly average pollutant concentrations in Table 3.

If the biosolids do not meet these requirements, the biosolids cannot be sold or given away for application to a lawn or home garden.

Class B Requirements:

If the biosolids are to be land applied to agricultural land, forest land, a public contact site or a reclamation site it must meet at all times:

The maximum heavy metals listed in Table 1 and the heavy metals loading rates in Table 2; or

The maximum heavy metals in Table 1 and the monthly heavy metals concentrations in Table 3.

If the biosolids do not meet these requirements they cannot be land applied.

NOTE: If the biosolids exceed Table 3 values for any parameter that are land applied to a site, that site thereafter is subject to the heavy metals loading rates in Table 2. Records for those sites are to be retained in perpetuity.

Tables 1, 2, and 3 of Heavy Metal Limitations

Heavy Metals	Table 1	Table 2	Table 3
All heavy metals concentrations shall be measured and reported	Daily Maximum mg/Kg <u>a/b/c/d/</u>	Cumulative Loading Rate Kg/Ha <u>a/</u>	Monthly Average Concentration mg/Kg <u>a/c/ d/</u>
Total Arsenic	75	41	41
Total Cadmium	85	39	39
Total Copper	4300	1500	1500
Total Lead	840	300	300
Total Mercury	57	17	17
Total Molybdenum	75	N/A	N/A
Total Nickel	420	420	420
Total Selenium	100	100	100
Total Zinc	7500	2800	2800

a/ See Part V. for definition of terms.

b/ The limitations represent the maximum allowable levels of heavy metals in any biosolids intended for land application.

c/ Any violation of these limitations shall be reported in accordance with the requirements of Part II.G.1. of this permit.

d/ These limitations represent the maximum allowable levels of heavy metals based on an average of all samples taken during a 30-day period.

2. Pathogen, Class A Limitations Through Testing and Processing:

If the biosolids are to be sold or given away in a bag or a similar container for application to home lawns and gardens, the biosolids shall meet either the *Salmonella* limitation or the Fecal Coliform limitation for pathogens. The biosolids also must meet a process to further reduce pathogens through composting, either through the windrow method of composting, or through the static aerated pile method of composting .

If the biosolids do not meet one of the two pathogen limitations listed below in Table 4, **and** a process to further reduce pathogens in Table 2, the biosolids cannot be sold or given away to the public.

Table 4

Must sample and meet either the Fecal Coliform <u>or</u> <i>Salmonella</i> Limits <u>a/c/</u>	AND	Must use either the windrow method of composting, <u>or</u> the static aerated pile method of composting for a process to further reduce pathogens <u>a/c/</u>
<i>Salmonella</i> shall be <3 MPN/4g of total solids OR Fecal Coliform shall be < 1000 MPN/g of total solids <u>b/</u>		Composting using the windrow method, the temperature of the biosolids is maintained at 55° C (131°F) or higher for at least 15 days, with a minimum of 5 turnings of the windrows during the 15 days. <u>b/</u> OR Composting using the static aerated pile method, the temperature of the biosolids is maintained at 55° C (131°F) or higher for at least 3 days. <u>b/</u>

Pathogen Class A Limitations Through Alternative 4 (Testing Only):

In lieu of a process to further reduce pathogens, the biosolids may be tested for the presence of the additional pathogens below, and must meet all three of the pathogen limitations listed in Table 5.

Table 5

All three pathogen limitations below must be met (Salmonella, enteric virus and viable helminth ova limitations) <u>a/c/</u>
The <i>salmonella</i> shall be less than 3 most probable number per 4 grams of biosolids or the fecal coliform shall be less than 1000 most probable number per gram of total solids. <u>b/</u>
The density of enteric viruses in the biosolids shall be less than 1 plaque-forming unit per 4 grams of total solids.
The density of viable helminth ova in the biosolids shall be less than 1 per 4 grams total solids.

Class B Pathogen Limitations:

If the biosolids are to be land applied, the biosolids shall meet the Class B pathogen limitations as described below, **or** meet a process to significantly reduce pathogens. If the biosolids do not meet the Class B pathogen requirements, **or** meet a process to significantly reduce pathogens, the biosolids cannot be land applied.

Class B through testing <u>a/c/</u>	Or	Class B through a process to significantly reduce pathogens <u>a/c/</u>
Fecal Coliform shall be less than 2,000,000 most probable number (MPN) per gram of total solids. <u>b/</u>		Solids are dried on beds for a minimum of 3 months. During 2 of those 3 months the average daily temperature is above 0 ⁰ C (32 ⁰ F).

3. Vector Attraction Reduction Requirements:

If the biosolids are to be land applied, the biosolids shall meet one of the vector attraction reduction requirements as below. If the biosolids do not meet at least one these requirements, the biosolids cannot be land applied.

Vector attraction reduction will be met by a 38% reduction in volatile solids through anaerobic digesters for at least 15 days at a temperature of at least 95°F (35°C). <u>c/</u>	Aerobic treatment of the biosolids for at least 14 days at over 40 ⁰ C (104 ⁰ F) with an average temperature of at least 45 ⁰ C (113 ⁰ F). <u>c/</u>	All Class A biosolids land applied shall be incorporated into the soil within 8 hours after land application. <u>c/</u>	All Class B biosolids land applied shall be incorporated into the soil within 6 hours after land application. <u>c/</u>	Solids are equal to or greater than 90% total solids when primary solids are present prior to land application. <u>c/</u>	Solids are equal to or greater than 75% total solids when primary solids are not present prior to land application. <u>c/</u>
OR	OR	OR	OR	OR	

- a/ See Part V.A. for definition of terms.
- b/ Based on a minimum of seven (7) samples of biosolids collected over a two week period (or as approved by the Executive Secretary in your sampling and analysis plan).
- c/ There are additional pathogen reduction and vector attraction reduction alternatives available in *40 CFR 503.32* and *40 CFR 503.33*. If the permittee intends to use one of these alternatives the Executive Secretary and the EPA must be informed at least 30 days prior to its use. This change may be made without additional public notice.

4. Self-Monitoring Requirements

- a. At a minimum, upon the effective date of this permit, all metals, pathogens and applicable vector attraction reduction requirements shall be monitored according to *40 CFR 503.16*.

Minimum Frequency of Monitoring (Dry Metric Tons (DMT))	
Amount of Biosolids Disposed Per Year	Monitoring Frequency
> 0 to < 290 DMT	Once Per Year
> 290 to < 1,500 DMT	Four Times Per Year
> 1,500 to < 15,000 DMT	Six Times Per Year
> 15,000 DMT	Twelve Times Per Year

- b. Deep soil monitoring for nitrate-nitrogen is required for all land application sites (does not apply to sites where biosolids are applied less than once every five years). A minimum of six samples for each 320 (or less) acre area is to be collected. These samples are to be collected down to either a 5 foot depth, or the confining layer, whichever is shallower (sample at 1 foot, 2 foot, 3 foot, 4 foot and 5 foot intervals). Each of these one-foot interval samples shall be analyzed for nitrate-nitrogen. In addition to the one-foot interval samples, a composite sample of the 5 foot intervals shall be taken, and analyzed for nitrate-nitrogen as well. Samples are required to be taken once every five years for non-irrigated sites that receive more than 18 inches of precipitation annually or for irrigated sites.
- c. Soil monitoring for phosphorus (reported as P) is required for all land application sites (does not apply to sites where biosolids are applied less than once every five years). Six samples of one foot depth each are to be collected for each 320 acre area and composited. Samples are required to be taken once every five years for non-irrigated sites that receive more than 18 inches of precipitation annually or for irrigated sites.
- d. Sample collection, preservation and analysis shall be performed in a manner consistent with the requirements of *40 CFR Part 503* and/or other criteria specified in this permit. Metals analysis is to be performed using *Method SW 846* with *Method 3050* used for digestion. For the digestion procedure, an amount of biosolids equivalent to one gram dry weight shall be used. The methods are also described in the latest version of the *Region VIII Biosolids Management Handbook*. Monitoring for soil nitrate and phosphorus is to be performed using the methods in *Methods of Soil Analysis, Part 2. Chemical and Microbiological Properties*. Page, A. L., Ed., American Society of Agronomy and Soil Science Society of America, Madison, WI, 1982.

- e. The Executive Secretary may request additional monitoring for specific pollutants derived from biosolids if the data shows a potential for concern.
- f. After two years of monitoring at the frequency specified, the permittee may request that the Executive Secretary reduce the sampling frequency for the chemical pollutants in Part I.B.1. The frequency cannot be reduced to less than once per year for land applied biosolids for any parameter. The frequency also cannot be reduced for any of the pathogen or vector attraction reduction requirements listed in this permit.

If heavy metals in the biosolids no longer meet the limitations in Table 3, the limitations in Table 2 and/or Table 4 must be used. The permittee shall determine cumulative pollutant loadings and/or annual pollutant loadings for each land application site.

C. Site Restrictions.

If the biosolids are Class B with respect to pathogens, R³ shall comply with all applicable site restrictions listed below:

- 1. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after application.
- 2. Food crops with harvested parts below the land surface shall not be harvested for 20 months after application if the biosolids remains on the land surface for four months or more prior to incorporation into the soil.
- 3. Food crops with harvested parts below the land surface shall not be harvested for 38 months after application if the biosolids remains on the land surface for less than four months prior to incorporation into the soil.
- 4. Other food crops and feed crops shall not be harvested from the land for 30 days after application.
- 5. Animals shall not be allowed to graze on the land for 30 days after application.
- 6. Turf grown on land where biosolids is applied shall not be harvested for one year after application if the harvested turf is placed on either land with a high potential for public exposure or a lawn.
- 7. Public access to land with a high potential for public exposure shall be restricted for one year after application.
- 8. Public access to land with a low potential for public exposure shall be restricted for 30 days after application.

D. Management Practices for Application of Biosolids to Land

The permittee shall operate and maintain the land application site operations in accordance with the following requirements:

1. The permittee shall provide to the Executive Secretary and the EPA within 90 days of the effective date of this permit a land application plan.
2. Application of biosolids shall be conducted in a manner that will not contaminate the groundwater or impair the use classification for that water underlying the sites.
3. Application of biosolids shall be conducted in a manner that will not cause a violation of any receiving water quality standard from discharges of surface runoff from the land application sites. Biosolids shall not be applied to land 10 meters or less from waters of the United States (as defined in *40 CFR 122.2*).
4. Application of biosolids shall be conducted in a manner that does not exceed the agronomic rate for available nitrogen of the crops grown on the site. At a minimum, the permittee is required to follow the methods for calculating agronomic rate outlined in the latest version of the *Region VIII Biosolids Management Handbook* (other methods may be approved by the Executive Secretary). The treatment plant shall provide written notification to the applier of the biosolids of the concentration of total nitrogen (as N on a dry weight basis) in the biosolids. Written permission from the Executive Secretary is required to exceed the agronomic rate.
5. Application of biosolids is prohibited to frozen, ice-covered, or snow covered sites where the slope of the site exceeds six percent.
6. No person shall apply biosolids for beneficial use to frozen, ice-covered, or snow-covered land where the slope of such land is greater than three percent and is less than or equal to six percent unless one of the following requirements is met:
 - a. there is 80 percent vegetative ground cover; or,
 - b. approval has been obtained based upon a plan demonstrating adequate runoff containment measures.
7. Biosolids shall not be applied to sites where the available phosphorous content of the soil exceeds the following:
 - a. 100 ppm as determined by the sodium bicarbonate extraction method
 - b. 50 ppm as determined by the AB-DPTA extraction method

- c. 170 ppm by the Bray P1 extraction method

The permittee may request these limits be modified if different limits would be justified based on local conditions. The limits are required to be developed in cooperation with the local agricultural extension office or university.

8. Biosolids shall not be applied to any site area with standing surface water. If the annual high groundwater level is known or suspected to be within five feet of the surface, additional deep soil monitoring for nitrate-nitrogen as described in Part I.4.b. is to be performed. At a minimum, this additional monitoring will involve a collection of more samples in the affected area and possibly more frequent sampling. The exact number of samples to be collected will be outlined in a deep soil monitoring plan to be submitted to the Executive Secretary and the EPA within 90 days of the effective date of this permit. The plan is subject to approval by the Executive Secretary.
9. The specified cover crop shall be planted during the next available planting season. If this does not occur, the permittee shall notify the Executive Secretary in writing. Additional restrictions may be placed on the application of the biosolids on that site on a case-by-case basis to control nitrate movement. Deep soil monitoring may be increased under the discretion of the Executive Secretary.
10. When weather and or soil conditions prevent adherence to the biosolids application procedure, biosolids shall not be applied on the site.
11. For biosolids that are sold or given away, an information sheet shall be provided to the person who receives the biosolids. The label or information sheet shall contain:
 - a. The name and address of the person who prepared the biosolids for sale or give away for application to the land.
 - b. A statement that prohibits the application of the biosolids to the land except in accordance with the instructions on the label or information sheet.
12. Biosolids subject to the cumulative pollutant loading rates in Table 2 (Part I.B.1.) shall not be applied to agricultural land, forest, a public contact site, or a reclamation site if any of the cumulative pollutant loading rates in Table 2 have been reached.
13. If R³ applies the biosolids, it shall provide the owner or lease holder of the land on which the biosolids are applied notice and necessary information to comply with the requirements in this permit.

14. For biosolids or material derived from biosolids that are stored in piles for one year or longer, measures shall be taken to ensure that erosion (whether by wind or water) does not occur. However, best management practices should also be used for piles used for biosolids treatment. If a treatment pile is considered to have caused a problem, best management practices could be added as a requirement in the next permit renewal.
15. The permittee shall inspect the application of the biosolids to active sites to prevent malfunctions and deterioration, operator errors and discharges which may cause or lead to the release of biosolids to the environment or a threat to human health. The permittee must conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment. The permittee shall keep an inspection log or summary including at least the date and time of inspection, the printed name and the handwritten signature of the inspector, a notation of observations made and the date and nature of any repairs or corrective action.

E. Special Conditions on Biosolids Storage

Permanent storage of biosolids is prohibited. Biosolids shall not be temporarily stored for more than two years. Written permission to store biosolids for more than two years must be obtained from the Executive Secretary. Storage of biosolids for more than two years will be allowed only if it is determined that significant treatment is occurring.

II. MONITORING, RECORDING AND REPORTING REQUIREMENTS

- A. Representative Sampling. Biosolids samples used to measure compliance with Part II of this Permit shall be collected at locations representative of the quality of biosolids generated at the treatment works and immediately prior to land application.
- B. Monitoring Procedures. Monitoring must be conducted according to test procedures approved under *40 CFR Part 503* unless other test procedures have been specified in this permit.
- C. Penalties for Tampering. The *Act* provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both.
- D. Reporting of Monitoring Results. R³ shall provide the results of all monitoring performed in accordance with Part I.C., and information on management practices, land application sites, site restrictions and certifications shall be provided no later than February 19 of each year. Each report is for the previous calendar year. If no biosolids were applied to the land during the reporting period, "no biosolids were applied" shall be reported. Legible copies of these, and all other reports required herein, shall be signed and certified in accordance with the Signatory Requirements (see Part IV.G.), and submitted to the Utah Division of Water Quality and the EPA at the following addresses:

Original to: Biosolids Coordinator
Utah Division of Water Quality
P. O. Box 144870
Salt Lake City Utah, 84114-4870

Copy to: Biosolids Coordinator, 8P-W-P
U. S. Environmental Protection Agency
Region VIII
999 18th Street, Suite 500
Denver, Colorado 80202-2466

- E. Additional Monitoring by the Permittee. If R³ monitors any pollutant more frequently than required by this permit, using test procedures approved under *40 CFR 503* or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted on the Biosolids Report form. Such increased frequency shall also be indicated.

F. Record Keeping

1. If so notified by the Executive Secretary R³ may be required to add additional record keeping if information provided indicates that this is necessary to protect public health and the environment.
2. If any metal from Table 3 increases to the point where the biosolids no longer meet the limits in Table 3, additional record keeping from *40 CFR 503.17* is required.
3. R³ is required to keep the following information for at least 5 years:
 - a. Concentration of each heavy metal in Table 3 (Part I.B.1.).
 - b. A description of how the pathogen reduction requirements in Part I.B.2. were met.
 - c. A description of how the vector attraction reduction requirements in Part I.B.3. were met.
 - d. A description of how the management practices in Part I.D. were met (if necessary).
 - e. The following certification statement:

"I certify under the penalty of law, that the heavy metals requirements in Part I.B.1., the pathogen requirements in Part I.B.2., the vector attraction requirements in Part I.B.3., the management practices in Part I.D. (if necessary) and the site restrictions in Part I.C. (if necessary) have been met. This determination has been made under my direction and supervision in accordance with the system designed to assure that qualified personnel properly gather and evaluate the information used to determine that the pathogen requirements, the vector attraction reduction requirements, the management practices and the site restrictions have been met. I am aware that there are significant penalties for false certification including the possibility of imprisonment."
4. Records of monitoring information shall include:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The initials or name(s) of the individual(s) who performed the sampling or measurements;
 - c. The date(s) analyses were performed;
 - d. The time(s) analyses were initiated;

- e. The initials or name(s) of individual(s) who performed the analyses;
 - f. References and written procedures, when available, for the analytical techniques or methods used; and,
 - g. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results.
5. R³ shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit and records of all data used to complete the application for this permit for the life of the permit. Data collected on site, copies of Biosolids Report forms, and a copy of this UPDES biosolids-only permit must be maintained on site during the duration of activity at the permitted location.

G. Twenty-four Hour Notice of Noncompliance Reporting.

- 1. R³ shall report any noncompliance including transportation accidents, spills, and uncontrolled runoff from biosolids transfer or land application sites which may seriously endanger health or the environment as soon as possible, but no later than 24 hours from the time R³ first became aware of the circumstances. The report shall be made to the Division of Water Quality at (801) 538-6146 or (801) 536-4123 (24-hour answering machine).
- 2. The following occurrences of noncompliance shall be reported by telephone to the Division of Water Quality at (801) 538-6146 by the first workday (8:00 a.m. - 4:30 p.m. Mountain Time).
 - a. Violation of any of the Table 1 metals limits, the pathogen limits, the vector attraction reduction limits or the management practices for biosolids that have been land applied.
- 3. A written submission shall also be provided within five days of the time that R³ becomes aware of the circumstances. The written submission shall contain:
 - a. A description of the noncompliance and its cause;
 - b. The period of noncompliance, including exact dates and times;
 - c. The estimated time noncompliance is expected to continue if it has not been corrected; and,
 - d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

4. The Executive Secretary may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Division of Water Quality, by phone, at (801) 538-6146.
 5. Reports shall be submitted to the addresses in Part II.D., Reporting of Monitoring Results.
- H. Other Noncompliance Reporting. Instances of noncompliance not required to be reported within 24 hours shall be reported at the time that monitoring reports for Part II.D. are submitted. The reports shall contain the information listed in Part II.F.3.
- I. Inspection and Entry. R³ shall allow the Executive Secretary, or authorized representative, upon the presentation of credentials and other documents as may be required by law, to:
1. Enter upon R³'s premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
 2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, including, but not limited to, biosolids treatment, collection, storage facilities or area, transport vehicles and containers, and land application sites; and,
 4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location, including, but not limited to, digested biosolids before dewatering, dewatered biosolids, biosolids transfer or staging areas, any ground or surface waters at the land application sites, or biosolids, soils, or vegetation on the land application sites.
 5. R³ shall make the necessary arrangements with the landowner or leaseholder to obtain permission or clearance, for the Executive Secretary, or authorized representative, upon the presentation of credentials and other documents as may be required by law, to be permitted to enter without delay for the purposes of performing their responsibilities.

III. COMPLIANCE RESPONSIBILITIES

- A. Duty to Comply. R³ must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and re-issuance, modification, or for denial of a permit renewal. R³ shall give the Executive Secretary advance notice of any planned changes at the permitted facility or of any activity which may result in permit noncompliance.
- B. Penalties for Violations of Permit Conditions. The Act provides that any person who violates a permit condition implementing provisions of the Act is subject to a civil penalty not to exceed \$10,000 per day of such violation. Any person who willfully or negligently violates permit conditions of the Act is subject to a fine not exceeding \$25,000 per day of violation; Any person convicted under UCA 19-5-115(2) a second time shall be punished by a fine not exceeding \$50,000 per day. Nothing in this permit shall be construed to relieve R³ of the civil or criminal penalties for noncompliance.
- C. Need to Halt or Reduce Activity not a Defense. It shall not be a defense for R³ in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- D. Duty to Mitigate. R³ shall take all reasonable steps to minimize or prevent any land application in violation of this permit.
- E. Proper Operation and Maintenance. R³ shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances), including but not limited to, all treatment, transportation, and application equipment which are installed or used by R³ to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by R³ only when the operation is necessary to achieve compliance with the conditions of the permit.

IV. GENERAL REQUIREMENTS

- A. Planned Changes. R³ shall give notice to the Executive Secretary as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
1. The alteration or addition could significantly change the nature or increase the quantity of pollutant land applied. This notification applies to pollutants which are not subject to limitations in the permit; or,
 2. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source.
- B. Anticipated Noncompliance. R³ shall give advance notice to the Executive Secretary of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- C. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by R³ for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- D. Duty to Reapply. If R³ wishes to continue an activity regulated by this permit after the expiration date of this permit, R³ must apply for and obtain a new permit. The application should be submitted at least 180 days before the expiration date of this permit.
- E. Duty to Provide Information. R³ shall furnish to the Executive Secretary, within a reasonable time, any information which the Executive Secretary may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. R³ shall also furnish to the Executive Secretary, upon request, copies of records required to be kept by this permit.
- F. Other Information. When R³ becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Executive Secretary, it shall promptly submit such facts or information.
- G. Signatory Requirements. All applications, reports or information submitted to the Executive Secretary shall be signed and certified.
1. All permit applications shall be signed by either a principal executive officer or ranking elected official.
 2. All reports required by the permit and other information requested by the Executive Secretary shall be signed by a person described above or by a duly

authorized representative of that person. A person is a duly authorized representative only if:

- a. The authorization is made in writing by a person described above and submitted to the Executive Secretary; and,
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)
3. Changes to authorization. If an authorization under Part IV.G.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part IV.G.2. must be submitted to the Executive Secretary prior to or together with any reports, information, or applications to be signed by an authorized representative.
 4. Certification. Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- H. Penalties for Falsification of Reports. The Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both.
- I. Availability of Reports. Except for data determined to be confidential under *40 CFR Part 2*, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Executive Secretary. As required by the Act, permit applications, permits and all data necessary to determine compliance with the permit conditions or applicable Federal or State biosolids regulations shall not be considered confidential.

- J. Oil and Hazardous Substance Liability. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve R³ from any responsibilities, liabilities, or penalties to which R³ is or may be subject under *Section 311 of the CWA*.
- K. Property Rights. The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.
- L. Severability. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
- M. Transfers. This permit may be automatically transferred to a new permittee if:
1. The current permittee notifies the Executive Secretary at least 30 days in advance of the proposed transfer date;
 2. The notice includes a written agreement between the existing permittee and the new permittee containing a specific date for transfer of permit responsibility, coverage, and liability between them; and,
 3. The Executive Secretary does not notify the existing permittee and the proposed new permittee of his or her intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph 2. above.
- N. State or Federal Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve R³ from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by *Section 510 of the Act* or any applicable Federal or State transportation regulations, such as but not limited to the Department of Transportation regulations.
- O. Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include the appropriate biosolids limitations (and compliance schedule, if necessary), management practices, other appropriate requirements to protect public health and the environment, or if there have been substantial changes (or such changes are planned) in biosolids use or disposal practices; applicable management practices or numerical limitations for pollutants in biosolids have been promulgated which are more stringent than the requirements in this permit; and/or it has been determined R³'s biosolids use or disposal practices do not comply with existing applicable state or federal regulations.

V. GLOSSARY OF TERMS

A. Definitions

1. "Animals" for the purposes of this permit are domestic livestock.
2. "Agronomic Rate" is the whole biosolids application rate (dry-weight basis) designed to: (1) provide the amount of nitrogen needed by the crop or vegetation grown on the land; and (2) minimize the amount of nitrogen in the biosolids that passes below the root zone of the crop or vegetation grown on the land to the ground water.
3. "Annual Metal Loading" is the maximum amount of a metal (dry-weight basis) that can be applied to a unit area of land during a 365-day period.
4. "Application Site or Land Application Site" means all contiguous areas of a users' property intended for biosolids application.
5. "Biosolids" means any material derived from sewage solids that have been biologically treated to meet land application standards.
6. "Composite Biosolids Sample" is a sample taken either in a wastewater treatment process, dewatering facility, or application device consisting of a series of individual grab samples. For liquid biosolids, a minimum of three grab samples of 500 milliliters taken during the first one-third, second one-third and final one-third of a pumping cycle and combined in equal volumetric amounts. For semi-dewatered, dewatered or dried biosolids, a composite sample consisting of a minimum of three grab samples of 0.5 pounds taken over a period of 24 hours not less than two hours apart or another representative sample as defined or approved by the permitting authority.
7. "CWA" means the *Clean Water Act* (formerly referred to as either the *Federal Water Pollution Act* or the *Federal Water Pollution Control Act Amendments of 1972*), *Pub. L. 92-500, as amended by Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483, Pub. L. 97-117, and Pub. L. 100-4.*
8. "Cumulative Metal Loading Rate" is the maximum amount of an inorganic metal (dry-weight basis) that can be applied to a unit area of land.
9. Executive Secretary means the Executive Secretary of the Utah Water Quality Board.
10. "Dry Weight-basis" means 100 percent solids (i.e., zero percent moisture).
11. "EPA" means the United States Environmental Protection Agency.

12. "Ha" means hectares. One hectare equals 2.47 acres.
13. "High Potential for Public Contact Site" is land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.
14. "Land Application" is the spraying or spreading of biosolids onto the land surface; the injection of biosolids below the land surface; or the incorporation of biosolids into the land so that the biosolids can either condition the soil or fertilize crops or vegetation grown in the soil. Land application includes distribution and marketing (i.e. the selling or giving away of the biosolids).
15. "Low Potential for Public Contact Site" is land with a low potential for contact by the public. This includes, but is not limited to, farms, ranches, reclamation areas, and other lands which are private lands, restricted public lands, or lands which are not generally accessible to or used by the public.
16. "Monthly Average" is the arithmetic mean of all measurements taken during the month.
17. "Pathogen" means an organism that is capable of producing an infection or disease in a susceptible host.
18. "Pollutant" for the purposes of this permit is an organic substance, an inorganic substance, a combination of organic and inorganic substances, or pathogenic organisms that, after discharge and upon exposure, ingestion, inhalation, or assimilation into an organism either directly from the environment or indirectly by ingestion through the food-chain, could, on the basis of information available to the Administrator of EPA, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunction in reproduction), or physical deformations in either organisms or offspring of the organisms.
19. "PFRP" means Processes to Further Reduce Pathogens, as described in detail in *40 CFR Part 257, Appendix II* and consists of composting, heat drying, heat treatment, thermophilic aerobic digestion, irradiation or pasteurization.
20. "PSRP" means Processes to Significantly Reduce Pathogens, as described in detail in *40 CFR Part 257, Appendix II* and consists of aerobic digestion, air drying, anaerobic digestion, composting, or lime stabilization.
21. "Runoff" is rainwater, leachate, or other liquid that drains overland on any part of a land surface and runs off of the land surface.
22. "Solids" means any material derived from sewage solids that have not been biologically treated to meet land application standards.

- 23. "Total Solids" are the materials in the biosolids that remain as residue if the biosolids is dried at 103 to 105 degrees Celsius.
- 24. "Treatment Works" are either Federally owned, publicly owned, or privately owned devices or systems used to treat (including recycling and reclamation) either domestic sewage or a combination of domestic sewage and industrial waste of a liquid nature.
- 25. "Vector Attraction" is the characteristic of biosolids that attracts rodents, flies, mosquitos or other organisms capable of transporting infectious agents.
- 26. "Volatile Solids" is the amount of the total solids in biosolids lost when the biosolids are combusted at 550 degrees Celsius for 15-20 minutes in the presence of excess air.